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published in
Journal of Family Issues
2018

DOI (link to publisher)
10.1177/0192513X16662100

document version
Publisher's PDF, also known as Version of record

Article

Journal of Family Issues
2018, Vol. 39(3) 555–578

DOI: 10.1177/0192513X16662100
journals.sagepub.com/home/jfi
SAGE

First-Time Motherhood Experiences and the Decision to Have a Second Child

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Abstract

Mothers' experiences with their firstborn child may be relevant for understanding the further growth of families. Dutch women (*N* = 795) reported on motherhood experiences during pregnancy and the first year. Direct effect models of mood symptoms, birth expectations, and child negative reactivity, and indirect effect models via parenting self-efficacy were tested to discriminate mothers who had, wanted, were undecided, and did not want a second child at a 2-year follow-up. Results indicated that mothers with two children had higher prenatal parenting self-efficacy and less postnatal trait anxiety compared with those who wanted a second child. There was no evidence for indirect effects of mood symptoms, birth expectations, or negative reactivity on having a second child via parenting self-efficacy. Also, mothers who did not want a second child had more unmet expectations regarding childbirth and, surprisingly, reported less child negative reactivity than other mothers. Implications of these findings are discussed.

Keywords

second child, first-time motherhood, parenting self-efficacy, childbirth, mood symptoms

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Becoming a mother is often thought of as a joyous occasion and increases have been found in perceived competence as a parent (Gameiro, Moura-Ramos, & Canavarro, 2009; Kunseler, Willemen, Oosterman, & Schuengel, 2014). In comparison, having a second child has not been found to increase maternal perceived competence (Gameiro et al., 2009). Parenting two young children may be more demanding than parenting one child. If mothers already have high parenting self-efficacy, the challenges of raising multiple children may appear less daunting (Coleman & Karraker, 1998). However, it is unknown whether first-time mothers' parenting self-efficacy acts independently or as a mediator in the complex set of factors that are associated with having multiple children or not. In the Netherlands, a second child can be planned, given the widespread use of contraceptive birth control and low abortion rates (Haandrikman & Van Wissen, 2008). Cognitions such as self-perceived competence to raise a child, also called parenting self-efficacy, may therefore be relevant to the set of behaviors and considerations that may or may not lead up to additional children. However, affective state and experiences around the transition to parenthood may play a direct and indirect role as well.

Parenting Self-Efficacy: Direct or Indirect Effects

Self-efficacy beliefs are important for setting goals (Bandura, 1977). People who feel inefficacious in a certain domain will be less ambitious in setting their goals for that domain (Bandura, 1977). Also, people who are more convinced about their skills and abilities are thought to be more motivated toward their goals and to persevere in difficult circumstances (Bandura, 1982). From this perspective, mothers who are more convinced about their skills and abilities as a parent may also be more inclined to take on the challenging task of parenting two young children than mothers with lower parenting self-efficacy. Mothers with two children are expected to have the highest parenting self-efficacy followed by lower levels of parenting self-efficacy for mothers who want a second child, are undecided, or who do not want a second child. No studies have thus far compared these different groups.

Teti, O'Connell, and Reiner (1996) have argued that parenting self-efficacy functions as a "final common pathway" (p. 238) of intrapersonal and interpersonal factors to parenting outcomes. Factors associated with parenting self-efficacy include mood symptoms (e.g., Giallo, Treyvaud, Cooklin, & Wade, 2013), childbirth expectations (e.g., Bryanton, Gagnon, Hatem, & Johnston, 2008), and child negative reactivity (e.g., Leerkes & Crockenberg, 2002). Therefore, when focusing on the associations between parenting self-efficacy and outcomes such as having multiple children not only direct

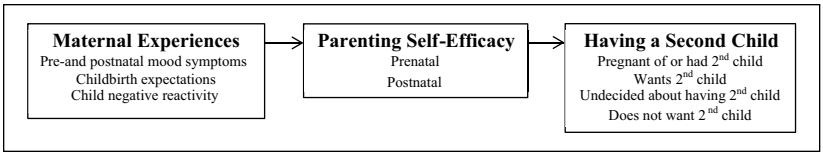

Figure 1. A conceptual model linking maternal experiences with parenting self-efficacy and the decision to have a second child.

models but also indirect models may be considered. In an indirect effects model, less mood symptoms (i.e., depressive, anxiety, and pregnancy anxiety), childbirth experiences that conformed to mothers' expectations, and lower child negative reactivity would be associated with higher parenting self-efficacy, which in turn, would be uniquely associated with having two children as compared with wanting a second child, being undecided about having a second child, and not wanting a second child, respectively. A conceptual model linking maternal experiences (e.g., mood, childbirth, children's temperament) with parenting self-efficacy and the decision to have a second child is depicted in Figure 1, and explained in greater detail below.

Mood Symptoms

As depicted in Figure 1, an important contributor to parenting self-efficacy would be the emotional states parents experience (Bandura, 1977; Teti et al., 1996). Postnatal depressive symptoms have been associated with parenting outcomes via parenting self-efficacy (e.g., Giallo et al., 2013). Prenatal depressive and prenatal and postnatal anxiety symptoms were consistently linked to lower prenatal and postnatal parenting self-efficacy (e.g., Kunseler et al., 2014). However, mediation effects of mood symptoms on choices to have a second child via parenting self-efficacy have not yet been tested.

In addition to depression and general anxiety, pregnancy-specific anxiety may be a relevant mood symptom to consider when examining women's decisions to have a second child, especially because individual differences in parenting self-efficacy may already coalesce during pregnancy, and thoughts about additional pregnancies may come up as well. Pregnancy anxiety includes specific fears, such as fear of bearing a physically or mentally handicapped child (Huizink, Mulder, Robles de Medina, Visser, & Buitelaar, 2004) and overlaps only partially with general anxiety (Huizink et al., 2004). Little is known about the link between pregnancy anxiety and parenting self-efficacy. Pregnancy anxiety could be an early and distal correlate of parenting self-efficacy. Therefore, higher prenatal pregnancy anxiety and prenatal and

postnatal depressive and anxiety symptoms could negatively affect prenatal as well as postnatal parenting self-efficacy, which in turn, as hypothesized, may decrease the likelihood of having a second child.

Childbirth Expectations

Positive childbirth experiences have been linked to subsequent pregnancies and births of additional children (Gottvall & Waldenström, 2002). In contrast, Klint Carlander, Andolf, Edman, and Wiklund (2014) did not find an effect of childbirth experiences at 9 months after giving birth on having a second child. Expectations regarding childbirth that are measured closer to the delivery (e.g., Gottvall & Waldenström, 2002) may be a better predictor of fertility decisions. Childbirth expectations (i.e., expecting high-quality support from nursing staff and partner) that are in line with actual experiences have been related to more positive evaluations of the birthing process (Heaman, Beaton, Gupton, & Sloan, 1992). Also, women who experienced childbirth as negative due to unmet expectations reported more feelings of disappointment and anger (Hauck, Fenwick, Downie, & Butt, 2007). As unmet childbirth expectations can foster negative feelings regarding childbirth (Hauck et al., 2007; Heaman et al., 1992), having a second child may also become less likely when mothers had more negative childbirth experiences while giving birth to their first child (Gottvall & Waldenström, 2002).

Unmet childbirth expectations may also be related to family size via parenting self-efficacy. Bryanton et al. (2008) found an association between positive birth experiences and higher parenting self-efficacy. As unmet childbirth expectations were related to more negative feelings regarding childbirth (Hauck et al., 2007; Heaman et al., 1992) and these more negative feelings about childbirth were related to parenting self-efficacy (Bryanton et al., 2008), we hypothesized that unmet childbirth expectations will negatively affect subsequent childbearing decisions via lower parenting self-efficacy (see Figure 1 for a depiction of this mediation effect).

Child Negative Reactivity

Negative evaluations of children's behavior (e.g., difficult temperament) predicted a greater likelihood of not having a second child (Jokela, 2010), consistent with Bandura's (1977) suggestion that experiences of mastery are important contributors to high self-efficacy beliefs. Generally, first-time mothers' parenting self-efficacy increases from pregnancy and over the first year (e.g., Kunseler et al., 2014), suggesting that actual parenting experiences usually foster parenting self-efficacy. Mothers with less positive experiences

such as raising a more temperamentally difficult child may be at risk for developing low parenting self-efficacy compared with mothers of less difficult children. Mothers whose children were more difficult also reported lower parenting self-efficacy (e.g., Giallo et al., 2013; Leerkes & Crockenberg, 2002). Importantly, there is also evidence for the mediation of the association between child temperament and parenting outcomes via parenting self-efficacy (Giallo et al., 2013). As such, and depicted in Figure 1, we hypothesized that lower parenting self-efficacy would act as a mediator of mothers' experiences with a difficult child (i.e., negative reactivity) and the likelihood of having a second child, with mothers of difficult children less likely to have a second child within 2 years of the first.

This Study

The current study used a social–cognitive framework to understand family expansion beyond having one child, focusing on prenatal and postnatal maternal psychosocial factors, which may complement current demographic (e.g., Sobotka, Skirbekk, & Philipov, 2011), sociological (e.g., Oppenheimer, 1994), and psychological perspectives (e.g., Jokela, 2010) on family size. Previous studies have used discrete-time survival analysis to link psychological factors to the actual occurrence of the second birth (e.g., Jokela, 2010). The current study for the first time used nested models comparing (a) mothers with a second child to mothers without a second child; (b) mothers with and who wanted a second child to mothers who were undecided and did not want a second child; and (c) mothers who did not want a second child to those who had, wanted, or were undecided about wanting a second child. These nested models enabled us to test our hypotheses derived from Bandura's social–cognitive theory that mothers with two children would have the highest parenting self-efficacy beliefs followed by lower parenting self-efficacy for mothers who wanted but did not yet have a second child, did not know whether they wanted a second child, and mothers who did not want a second child, respectively. Parenting self-efficacy was also tested as a possible mediator between maternal experiences with childbirth and child rearing and their decision to have a second child. We expected more negative mood symptoms during pregnancy and the first year, unmet childbirth expectations, and more child negative reactivity in the first year would result in lower prenatal and/or postnatal parenting self-efficacy, which in turn, would predict pregnancy and birth of a second child. Factors that may predict having a second child, such as maternal age (Bongaarts, 2002), firstborn child gender (Hank, 2007), maternal education (McLanahan, 2004), and family income (Sobotka et al., 2011), were included as control variables.

Method

Sample

First-time pregnant women (N = 795) ranged in age from 19 to 42 years (M = 30.36, SD = 3.8) at the birth of their first child. Most women were living with their partner (53%) or were married (43%), with few women (4%) being single or living separately from their partner. The sample was highly educated with most having obtained higher professional education diplomas (39%) or university degrees (34%). Fewer women had a middle-level applied education or lower (27%). Gross income was measured with four categories of which the lowest category was merged with the second lowest, resulting in three groups: less than €42.900 (26%), €42.900 to €69.700 (39%), and more than €69.700 (34%). Women predominantly had two Dutch parents (91%), 6% had at least one parent who was non-Dutch Western and the remaining 3% had at least one parent who was non-Western. The sample contained slightly more firstborn girls (51%) than boys. More first-time pregnancies were planned (87%) than unplanned (13%). Compared with the general Dutch population (Statistics Netherlands, 2013a), mothers in the current study were on average 1 year older when having their first child, more often had a firstborn girl (51% vs. 49%), and were less likely to be married (43% vs. 56%). For most mothers, gross income was comparable to or higher than the general population (€47.000 spendable income for a two-person household with a child; Statistics Netherlands, 2013b). Also, mothers more often were highly educated (73% vs. 28%; Statistics Netherlands, 2012) and less often non-Dutch (9% vs. 24%; Statistics Netherlands, 2014). This study was conducted within the larger cohort study Generations[2], which is a longitudinal study on changes in maternal intrapersonal and interpersonal factors in the transition to parenthood and the development of the early infant–mother relationship.

Procedure

First-time pregnant women were recruited through midwifery practices, websites, and "what to expect when you're expecting"—information meetings in community centers in the area of Amsterdam. Informed consent was obtained from pregnancy to the first year after birth and questionnaires were sent via postal mail including a self-addressed envelope. Mothers giving permission to be contacted for future research were approached when their child was 1.8 years and contacted to participate in the 2-year assessment until children reached the age of 2.5 years. After obtaining written consent for the 2-year assessment, women received a personal login code to complete online

questionnaires. If questionnaires were not completed within 2 weeks, women were sent a reminder by e-mail and 2 weeks later, they were contacted by phone. This process was repeated until birth for the prenatal assessment, until 9 months for the 3-month assessment ($M = 3.11$, $SD = 0.64$), until 1.5 years for the 1-year assessment ($M = 1.12$, $SD = 0.05$), and until 2.5 years for the 2-year assessment ($M = 2.25$, $SD = 0.39$). All participants that had reached the 2-year assessment were included in the study. In total, 1,838 women enrolled in the larger ongoing Generations[2] study during pregnancy from which 80% was still enrolled at the 1-year follow-up. Data analyses of the current study were based on 795 participants who had reached and participated at the 2-year assessment, which is 60% of the total expected sample size (based on a response rate of 90% at the 2-year assessment).

Measures

Second Child Status. At 2 years, mothers were asked "If you think about the future, do you want a second child?" The distribution of the response options were as follows: 424 mothers were pregnant or had a second child, 259 mothers wanted a second child but were not yet pregnant, 39 mothers were undecided about having or not having a second child, and 73 mothers stated not wanting a second child. A total of 89% of the women who had a second child or were pregnant had planned their second pregnancy and 11% had an unplanned but wanted pregnancy. Comparing this with the first pregnancy, also 89% had a planned and wanted pregnancy, 10% had an unplanned but wanted pregnancy, and only 1% had an unplanned and unwanted first pregnancy.

Pregnancy Anxiety. The Dutch translation of the Pregnancy Related Anxieties Questionnaire (Huizink, 2000; Huizink et al., 2004) was used to measure specific fears and concerns regarding the pregnancy at 12, 22, and 32 weeks. The questionnaire consisted of 34 items (e.g., "I am afraid of pain during the contractions and the childbearing") that were scored on a 5-point Likert-type scale ranging from 1 = *absolutely not applicable* to 5 = *very well applicable*. Total scores were divided by 34 to create mean scores. High scores reflected high pregnancy anxiety. Internal consistency of this measure was good at 12 ($\alpha = .81$), 22 ($\alpha = .89$), and 32 ($\alpha = .89$) weeks. An average mean of the three assessments was used in the analyses.

First-Birth Expectations. At 3 months postpartum, mothers answered the question: "Was childbirth in general as you expected it would be?" which was scored on a 4-point Likert-type scale ranging from 1 = *totally not as I had*

expected to 4 = *exactly as I had expected*. Higher scores reflected more confirmation of first-birth expectations.

Depressive Symptoms. The Dutch Beck Depression Inventory–II (Van der Does, 2002) was used to measure depressive symptoms over the past 2 weeks including the day of the assessment at 12, 22, and 32 weeks' pregnancy and 3 months and 12 months postpartum. Perceptions of 21 symptoms (e.g., sadness, pessimism, suicidal thoughts) were scored on a 4-point scale ranging from 0 = *absent* to 3 = *highly intense*. The sum of the item scores was divided by 21 to obtain the total mean score. Higher average scores were indicative of more depressive symptoms. Internal consistency of this measure during pregnancy was good at 12 ($\alpha = .82$), 22 ($\alpha = .82$), and 32 ($\alpha = .83$) weeks as well as 3 ($\alpha = .86$) and 12 ($\alpha = .86$) months postpartum. A prenatal and postnatal average mean was used in the analyses.

Anxiety Symptoms. The Dutch translation of the Spielberger State–Trait Anxiety Inventory (Van der Ploeg, Defares, & Spielberger, 1980) was used to measure anxiety symptoms at 12, 22, and 32 weeks' pregnancy and 3 months and 12 months postpartum with 20 items for state (e.g., "I feel anxious") and 20 items for trait (e.g., "I feel at ease") anxiety. Total scores were divided by 20 to create mean scores. State anxiety could be answered with 1 = *not at all* to 4 = *very much so* and trait anxiety could be answered with 1 = *almost never* to 4 = *almost always*. Internal consistency of this measure was excellent at 12 (State: $\alpha = .96$; Trait: $\alpha = .96$), 22 (State: $\alpha = .96$; Trait: $\alpha = .96$), and 32 (State: $\alpha = .94$; Trait: $\alpha = .93$) weeks' pregnancy, as well as 3 (State: $\alpha = .94$; Trait: $\alpha = .94$), and 12 (State: $\alpha = .97$; Trait: $\alpha = .97$) months postpartum. A prenatal and postnatal average mean was used in the analyses.

Child Negative Reactivity. Firstborn children's perceived temperament was measured by combining two scales of the Infant Behavior Questionnaire (Rothbart, 1981): (a) distress to limitations and (b) distress and latency to approach sudden or novel stimuli to assess negative reactivity at 3 and 12 months. Distress to limitations consisted of 20 items (e.g., "During feeding, how often did the baby: fuss or cry when he had enough to eat?") and distress and latency to approach sudden or novel stimuli consisted of 16 items (e.g., "How often during the past week did the baby: cry or show distress when tickled?"). All items were rated on a 7-point Likert-type scale from 1 = *never* to 7 = *always* or mothers could mark "not applicable," with higher scores indicating higher negative reactivity. The sum of the items per subscale was divided by the number of items answered with 1 to 7. Internal consistency of these measures was good at 3 ($\alpha = .84$) and 12 ($\alpha = .82$) months. The mean

score of the two assessments at 3 and 12 months was used in the analyses to increase the robustness.

Parenting Self-Efficacy. Parenting self-efficacy regarding the firstborn was measured with a Dutch translation of the Maternal Self-Efficacy in the Nurturing Role Questionnaire (Pedersen, Bryan, Huffman, & Del Carmen, 1989) at 12, 22, and 32 weeks' pregnancy and 3 and 12 months postpartum. The questionnaire consisted of 16 items (e.g., "I wonder if I really understand my baby's needs") that were scored on a 7-point Likert-type scale ranging from 1 = *not at all representative of me* to 7 = *strongly representative of me*. The sum of the item scores was divided by 16 to obtain the total mean score. Higher average scores reflected higher parenting self-efficacy beliefs. Internal consistency of this measure was good at 12 ($\alpha = .85$), 22 ($\alpha = .88$), and 32 ($\alpha = .88$) weeks' pregnancy and at 3 ($\alpha = .84$) and 12 ($\alpha = .85$) months postpartum. A prenatal and postnatal average mean was used in the analyses.

Data Analytic Plan for Nested Models

Multiple imputations were used to minimize bias as a result of random missing data and were done using predictive mean matching (Little, 1988). Models were checked for outliers, linearity of the logit (Hosmer & Lemeshow, 1989), and multicollinearity (Field, 2009) and reported on in case of abnormalities. Hierarchical logistic regression models were run using nested models. The first model compared mothers with two children with mothers with one child. The second model compared mothers with two children and mothers who wanted two children with undecided mothers and mothers who did not want two children. The third model compared mothers with two children, mother who wanted two children, and undecided mothers to mothers who did not want two children. Odds ratios were interpreted based on an increased likelihood of a variable being associated with the reference group. Odds ratios for negatively associated variables were recalculated (1 divided by the odds ratio) to report the increased likelihood of the reference group for a decrease in that particular variable. Each model consisted of the same steps with control variables in Step 1 (i.e., child age, maternal age, child gender, education, and income), pregnancy anxiety and unmet first-birth expectations in Step 2, mood symptoms in Step 3 (i.e., depressive and anxiety symptoms), child negative reactivity in Step 4, and parenting self-efficacy in Step 5. Nonsignificant steps and variables were omitted from the analyses. Significant variables were tested for indirect effects via parenting self-efficacy by using the Preacher and Hayes (2004) bootstrapping resampling method. The

statistical significance of each step was determined by examining the increment of Nagelkerke pseudo R^2.

Results

Preliminary Results

Missing data were missing completely at random (MCAR) based on Little's MCAR test; $\chi^2 = 1862.17$, degrees of freedom = 14,532, $p = 1$. Assumptions of logistic regression analyses were not violated and there were no outliers influencing the models. Descriptive statistics and associations between continuous study variables are shown in Table 1. Cross tabulations between child gender, education, and income indicated that women with a higher education level received more gross income; $\chi^2(4, N = 795) = 115.37$, $p < .001$. Univariate models (SPSS did not provide pooled data, therefore original sample size was reported) showed that higher educated mothers reported less prenatal depressive symptoms, $F(2, 722) = 10.87$, $p < .001$; less postnatal depressive symptoms, $F(2, 768) = 4.51$, $p < .05$; less prenatal trait anxiety, $F(2, 722) = 10.06$, $p < .001$; less prenatal state anxiety, $F(2, 719) = 5.91$, $p < .01$; and more child negative reactivity, $F(2, 766) = 6.21$, $p < .01$. Mothers with a higher income reported childbirth to be more as expected, $F(2, 650) = 4.630$, $p < .05$; less prenatal depressive symptoms, $F(2, 631) = 4.69$, $p < .01$; less postnatal depressive symptoms, $F(2, 670) = 4.36$, $p < .05$; less prenatal trait anxiety symptoms, $F(2, 634) = 11.7$, $p < .001$; less postnatal trait anxiety symptoms, $F(2, 667) = 6.47$, $p < .01$; less prenatal state anxiety symptoms, $F(2, 632) = 10.46$, $p < .01$; and postnatal state anxiety symptoms, $F(2, 667) = 3.54$, $p < .05$. Mothers with two children had somewhat older children at 2 years than mothers with one child, $t(793) = -2.59$, $p = .015$. Mothers who wanted a second child and mothers who were undecided were more likely to have a firstborn girl than a boy; $\chi^2(2, N = 795) = 13.26$, $p < .01$. The current study controlled for the effects of maternal age, maternal education, gross income, child age, and child gender.

First-Time Motherhood Experiences Predicting Second Child Status

Hierarchical logistic regressions were conducted testing direct and indirect effects in three nested models.

First-Time Motherhood Experiences Predicting Having Two Children (Model 1). Variables in Model 1 explained 15% of the variance comparing mothers with

Table 1. Correlations and Descriptive Statistics of Continuous Predictor Variables.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Maternal age	—	.01	.04	−.1**	.03	−.04	.02	−.03	.07	−.05	−.02**	−.13***
2. Pregnancy anxiety		—	−.14**	.54***	.45***	.65***	.52***	.65***	.48***	.28***	−.56***	−.46***
3. Childbirth expectations			—	−.15***	−.17***	−.17***	−.16***	−.16***	−.13***	−.08*	.1*	.1*
4. Depressive symptoms prenatal				—	.59***	.7***	.49***	.67***	.4***	.17***	−.29***	−.28***
5. Depressive symptoms postnatal					—	.56***	.75***	.51***	.71***	.27***	−.3***	−.47***
6. Anxiety symptoms^{state} prenatal						—	.8***	.86***	.64***	.22***	−.48***	−.45***
7. Anxiety symptoms^{state} postnatal							—	.63***	.87***	.29***	−.42***	−.57***
8. Anxiety symptoms^{trait} prenatal								—	.63***	.22***	−.49***	−.44***
9. Anxiety symptoms^{trait} postnatal									—	.29***	−.41***	−.55***
10. Child negative reactivity										—	−.24***	−.34***
11. PSE prenatal											—	.67***
12. PSE postnatal												—
M	30.36	1.95	2.42	0.41	0.33	1.59	1.49	1.58	1.51	2.79	5.66	6
SD	3.81	0.39	0.97	0.2	0.22	0.38	0.4	0.37	0.4	0.5	0.56	0.53
Minimum	18.74	1.12	1	0	0	1	1	1	1	1.41	3.42	4
Maximum	41.8	3.89	4	1.35	1.45	3.13	3.23	3.23	3.13	4.25	7	7

Note. PSE = parenting self-efficacy.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2. Model 1: Hierarchical Logistic Regression Predicting Mothers With Two Children (N = 424) Compared With One Child Mothers (N = 371).

	B (*SE*)	*OR*	95% CI	*p*
Step 1	Step χ^2 = 67.37, p < .001			
Control variables	Pseudo R^2 = .11			
Child age	0.59 (0.2)	1.81	[1.21, 2.68]	.004
Maternal age	−0.1 (0.02)	0.9	[0.86, 0.94]	<.001
Education (low-high)	0.94 (0.22)	2.56	[1.67, 3.92]	<.001
Education (mid-high)	0.71 (0.18)	2.04	[1.43, 2.91]	<.001
Education (mid-low)	*ns*			
Income (low-high)	0.56 (0.24)	1.76	[1.1, 2.82]	0.02
Income (mid-high)	0.52 (0.21)	1.68	[1.11, 2.56]	.015
Income (mid-low)	*ns*			
Step 2	Step χ^2 = 18.8, p < .001			
Mood	Pseudo R^2 = .03			
$STAI^{trait}$ postnatal	−0.63 (0.21)	0.53	[0.35, 0.81]	.003
Step 3	Step χ^2 = 5.62, p < .05			
PSE	Pseudo R^2 = .01			
PSE prenatal	0.35 (0.15)	1.41	[1.06, 1.89]	.019
Model χ^2	91.79, p < .001			
Pseudo R^2	.15			

Note. STAI = State–Trait Anxiety Inventory; PSE = parenting self-efficacy; CI = confidence interval; *OR* = odds ratio; *SE* = standard error.

two children with mothers with one child, of which 4% was explained by psychosocial experiences (see Table 2).

A one-point higher prenatal parenting self-efficacy (average scores ranged from 3.42 to 7.00) was associated with a 1.41 times greater likelihood to have a second child compared with not having a second child. Prenatal parenting self-efficacy was associated with having versus wanting a second child, suggesting there may be indirect effects of prenatal mood symptoms on second child status. Prenatal indirect effects were tested using the bootstrapping resampling method of Preacher and Hayes (2004). The 95% confidence interval (CI) of the indirect effects included zero for depressive symptoms, 95% CI [−0.001, 0.001], state anxiety symptoms, 95% CI [−0.005, 0.016], trait anxiety symptoms, 95% CI [−0.005, 0.015], and pregnancy anxiety, 95% CI [−0.001, 0.012], while controlling for child age, maternal age, education, and income (pooled results are not available in SPSS, but original data and separate imputations did not yield different results). Thus, there were no indirect effects of prenatal mood symptoms on having a second child via prenatal parenting self-efficacy.

A one-point higher postnatal trait anxiety symptoms score was associated with a 0.53 times lesser likelihood for mothers to have a second child compared with not having a second child. Conversely, a one-point lower postnatal trait anxiety symptoms score (average scores ranged from 1 to 3.13) was associated with a 1.88 (1/0.53) times greater likelihood for mothers to have a second child compared with not having a second child.

Demographic factors explained most of the variance (11%). Every year a mother was older, mothers were 0.9 times less likely to have two children. Conversely, every year a mother was younger, mothers were 1.11 (1/.9) more likely to have two children. Mothers within the high-education group were 2.55 times more likely than within the low-education group and 2.04 times more likely than the middle-education group to have two children. Mothers in the high-income group were 1.76 times more likely than the low-income group and 1.68 times more likely than the middle income group to have two children.

First-Time Motherhood Experiences Predicting Mothers With Two Children and Who Wanted Two Children (Model 2). Variables in Model 2 explained 27% of the variance comparing mothers with two children and mothers who wanted two children with undecided mothers and mothers who did not want two children of which 6% was explained by childbirth expectations and child temperament (see Table 3). Parenting self-efficacy was not a significant predictor and, therefore, no indirect effects were tested. Mothers whose childbirth experiences with the first child were one point (ranging from 1 to 4) more in line with their expectations were 1.69 times more likely to have or want a second child. Surprisingly, mothers reporting one point higher on child negative reactivity (average scores ranged from 1.41 to 4.25) during the first year after the birth of their first child were 1.94 times more likely to have or want a second child.

Demographic factors explained most of the variance (21%) in Model 2. Mothers with a firstborn boy were 2.52 times more likely to have or want a second child. Every year mothers were older, mothers were 0.81 times less likely to have or want a second child. Conversely, every year a mother was younger, mothers were 1.23 (1/0.81) more likely to have or want a second child. Mothers within the high-education group were 4.85 times more likely than the low-education group and 3.5 times more likely than the middle-education group to have or want a second child. Mothers in the high-income group were 2.33 times more likely than the low-income group to have or want a second child.

First-Time Motherhood Experiences Predicting Mothers With Two Children, Who Wanted Two Children, and Undecided Mothers (Model 3). Variables in Model 3

Table 3. Model 2: Hierarchical Logistic Regression Predicting Mothers Who Had or Wanted a Second Child (N = 683) Compared With Mothers Who Did Not Want a Second Child or Did Not Know Yet (N = 112).

	B (*SE*)	*OR*	95% CI	*p*
Step 1	Step χ^2 = 100.16, p < .001			
Control variables	Pseudo R^2 = .21			
Child gender	0.92 (0.24)	2.52	[1.57, 4.03]	<.001
Maternal age	−0.21 (0.03)	0.81	[0.76, 0.86]	<.001
Education (low-high)	1.58 (0.36)	4.85	[2.4, 9.8]	<.001
Education (mid-high)	1.25 (0.32)	3.5	[1.86, 6.6]	<.001
Education (mid-low)	*ns*			
Income (low-high)	0.85 (0.36)	2.33	[1.15, 4.74]	.02
Income (mid-high)	*ns*			
Income (mid-low)	*ns*			
Step 2	Step χ^2 = 18.35, p < .001			
Pregnancy and birth	Pseudo R^2 = .04			
Birth expectations	0.53 (0.14)	1.69	[1.29, 2.24]	<.001
Step 3	Step χ^2 = 8.13, p < .01			
Child	Pseudo R^2 = .02			
Negative reactivity	0.66 (0.25)	1.94	[1.2, 3.14]	.01
Model χ^2	126.64, p < .001			
Pseudo R^2	.27			

Note. CI = confidence interval; *OR* = odds ratio; *SE* = standard error.

explained 26% of the variance comparing mothers with two children, who wanted two children, and undecided mothers with mothers who did not want two children of which 7% was explained by psychosocial experiences (see Table 4). Parenting self-efficacy was not a significant predictor and, therefore, no indirect effects were tested. Mothers whose childbirth experiences with the first child were one point (ranging from 1 to 4) more in line with their expectations were 2.04 times more likely to have, want, or not know about a second child compared with mothers who did not want a second child. Surprisingly, mothers reporting one point higher on child negative reactivity (average scores ranged from 1.41 to 4.25) during the first year were 1.96 times more likely to have, want, or not know about a second child.

Demographic factors also explained most of the variance (19%) in Model 3. Mothers with a firstborn boy were 2.49 times more likely to have, want, or not know about a second child compared with mothers who did not want a second child. Every year mothers were older, mothers were 0.79 times less likely to have, want, or not know about a second child. Conversely, every

Table 4. Model 3: Hierarchical Logistic Regression Predicting Mothers With a Second Child, Wanted a Second Child, or Did Not Know Yet (N = 722) Compared With Mothers Who Did Not Want a Second Child (N = 73).

	B (*SE*)	*OR*	95% CI	*p*
Step 1	Step χ^2 = 71.92, p < .001			
Control variables	Pseudo R^2 = .19			
Child gender	0.91 (0.29)	2.49		<.001
Maternal age	−0.24 (0.04)	0.79	[0.74, 0.85]	<.001
Education (low-high)	1.56 (0.4)	4.76	[2.19, 10.32]	<.001
Education (mid-high)	1.15 (0.37)	3.12	[1.52, 6.53]	.002
Education (mid-low)	*ns*			
Step 2	Step χ^2 = 23.6, p < .001			
Pregnancy and birth	Pseudo R^2 = .06			
Birth expectations	0.71 (0.19)	2.04	[1.38, 3.01]	.001
Step 3	Step χ^2 = 5.99, p < .05			
Child	Pseudo R^2 = .01			
Negative reactivity	0.67 (0.29)	1.96	[1.12, 3.45]	.02
Model χ^2	101.51, p < .05			
Pseudo R^2	.26			

Note. CI = confidence interval; *OR* = odds ratio; *SE* = standard error.

year a mother was younger, mothers were 1.27 (1/0.79) more likely to have, want, or not know about a second child. Mothers with in the high-education group were 4.76 times more likely than the low-education group and 3.12 times more likely than the middle-education group to have, want, or not know about a second child compared with not want a second child.

Comparing the Models

Variables in Model 1 explained the least amount of the variance (15%), whereas variables in Model 2 explained most of the variance (27%), which was comparable with Model 3 (26%). In all models, demographic variables explained the largest amount of variance, with younger maternal age, higher income, higher education, and having a firstborn boy associated with the increased likelihood of having and wanting a second child compared with not having or wanting a second child. Model 1 suggested that mothers with two children could be distinguished from mothers with one child based on lower postnatal trait anxiety symptoms and higher prenatal parenting self-efficacy. This was not the case for Models 2 and 3. The difference between Models 1 and 2 was the prediction of the mothers with two children (Model 1)

in comparison with mothers with two children and mothers who wanted a second child (Model 2). Thus, mothers who wanted a second child differed in mood and parenting self-efficacy from mothers with two children. In Model 2, mothers with two children and mothers who wanted two children reported lower unmet childbirth expectations and more child negative reactivity than undecided mothers and mothers who did not want a second child. Group membership of undecided mothers did not yield different results (Model 3), showing that these mothers were comparable to mothers who wanted two children as well as mothers who did not want a second child based on the study variables.

Discussion

The current study revealed an association between parenting self-efficacy and having a second child. Mothers with two children had higher parenting self-efficacy during pregnancy of their first child than women who wanted but did not yet have a second child. This effect was found after correcting for a difference in time between childbirth and the 2-year assessment, suggesting it was not a timing effect. Parenting self-efficacy was also hypothesized to act as a proximal mediator for distal mood symptoms and child negative reactivity, but no evidence for such indirect effects was found. Rather, there was a direct effect of postnatal trait anxiety symptoms on having a second child. Also, mothers who did not want a second child reported more unmet childbirth expectations, yet surprisingly reported less child negative reactivity. The largest amount of variance across all models was explained by demographic factors. Experiences with motherhood appeared therefore as a very subtle and limited factor in deciding to have additional children.

Prenatal Parenting Self-Efficacy: Direct, No Indirect, Effect

Higher prenatal parenting self-efficacy predicted an increased likelihood of mothers having a second child compared with mothers wanting but not yet having a second child. In line with Bandura (1977), some mothers may have felt more equipped with their parenting abilities and were better prepared for the challenge of raising two young children. Although parenting self-efficacy can be assessed already during pregnancy and predicted postnatal maternal mood and parenting self-efficacy (e.g., Kunseler et al., 2014), there is little insight into the development of parenting self-efficacy during pregnancy. Coleman and Karraker (1998) suggested several possible ways in which prenatal parenting self-efficacy may develop. For instance, women adjust in varying ways to upcoming parenthood on a cognitive and emotional level,

suggesting that some mothers may feel more confident in becoming a parent than others (Kunseler et al., 2014). Based on prenatally formed parenting self-efficacy, some mothers may feel more prepared than other mothers for becoming a mother of multiple children.

According to the "need to nurture" hypothesis, having one compared with multiple children may be motivated by different factors, such as the size of parents' family of origin (Foster, 2000). There is evidence that relatively stable personality traits can affect family size after the first child. Jokela, Kivimäki, Elovainio, and Keltikangas-Järvinen (2009) have shown that more sociable individuals and parents who show less negative emotionality were more likely to have a second child. This suggests that prenatal parenting self-efficacy could be a trait-like factor developed even before becoming a parent, which may affect having versus wanting a second child.

The results render it unlikely that experiences with postnatal parenting self-efficacy affect decisions about a second child. First-time mothers' parenting self-efficacy has been found to increase from the prenatal period to the first year (e.g., Kunseler et al., 2014), suggesting that mothers with lower parenting self-efficacy may have caught up with the prenatally more efficacious mothers. Also, in previous studies, parenting self-efficacy has been related to parenting outcomes, which often encompasses particular parenting behaviors, such as limit setting or sensitivity (Miller-Heyl, MacPhee, & Fritz, 1998). Having a second child may be a more distal parenting outcome, influenced by many other factors found in demographic and sociological studies on childbearing. We controlled for factors that may affect having a second child (i.e., maternal age, child gender, maternal education, and family income), which may have been more powerful predictors than postnatal parenting self-efficacy.

Following Teti et al.'s (1996) mediation model of parenting self-efficacy, we hypothesized that mood symptoms, birth expectations, and child negative reactivity would be associated with having a second child via parenting self-efficacy. There was no direct effect of postnatal parenting self-efficacy on second child status which excludes the possibility of indirect effects. There was a direct effect of prenatal parenting self-efficacy, but no indication of indirect effects of prenatal mood symptoms on second child status via prenatal parenting self-efficacy.

Mood Symptoms, Birth Expectations, Child Negative Reactivity: Direct Effects

Postnatal trait anxiety symptoms measured over the first year were higher among mothers who wanted a second child compared with mothers who already had two children. Trait anxiety can be considered a stable personality

trait related to the tendency of a person to react with apprehension and nervousness compared with state anxiety which refers to current feelings of tension and worry (Spielberger, 2010). Nevertheless, trait anxiety can change and does increase from the prenatal to the postnatal period (Kunseler et al., 2014), possibly explaining why no links were evident with prenatal trait anxiety symptoms in the current study. Higher postnatal trait anxiety symptoms of mothers who wanted a second child may have made them more reluctant and hesitant to become pregnant with a second child as a result of increased feelings of worries and apprehension during the first year compared with mothers with two children.

Mothers who did not want a second child compared with mothers who had or wanted a second child had more unmet childbirth expectations with the first child. This is in line with findings linking violations of expectations, whether positive or negative, to negative childbirth experiences (Hauck et al., 2007) which have been related to a lower likelihood of giving birth to subsequent children (Gottvall & Waldenström, 2002).

Surprisingly, women who had or wanted two children experienced their first child's behavior during the first year as more negative than women who did not want a second child. This finding is contrary to Jokela's (2010) finding that overall more positive perceptions of early child behavior were related to an increased chance of having a second child. However, Jokela (2010) also unexpectedly found that mothers who reported more emotional symptoms at age 3 (not at age 5) were also more likely to have a second child and argued that heightened child emotionality may have been the temporary result of the birth of a sibling, given their finding only applied to sibling birth before age 3 and not after. Jokela (2010) also noted that more fearful child behavior may elicit positive parenting (Van Bakel & Riksen-Walraven, 2002), allowing mothers of negatively reactive children to experience a broader range of child behaviors in the infancy of their first child. In response to exposure to a larger variety of infant behaviors, some mothers may have developed a wider range of parenting behaviors suitable for dealing with many different and difficult types of infant temperament (Leerkes & Crockenberg, 2002). This may especially be true for mothers with difficult infants who are easy to soothe. In this way, mothers may have felt better equipped to deal with a second child as a result.

Demographic Factors

Family size is traditionally studied as an indicator of demographic transitions that are related to industrialization and other socioeconomic processes (Sobotka et al., 2011). As a proxy for often complexly studied demographic

determinants of family size, maternal age (Bongaarts, 2002), gender of the first child (Hank, 2007), maternal education (McLanahan, 2004), and family income (Sobotka et al., 2011) were included as control variables. In all models, demographic factors explained most of the variance in second child status, suggesting that psychological research should include demographic factors to gauge the relative impact of first-time motherhood experiences on having a second child.

Limitations and Directions for Future Research and Practice

The current study has several limitations. First, psychological research indicates that intentions to become a parent are determined by the personality traits of both parents (Hutteman, Bleidorn, Penke, & Denissen, 2013). Also, Thomson (1997) demonstrated that, besides one's own desire to have a child, the partner's desire to have a child also affected fertility intentions of the couple. Parental gender and dyadic effects are relatively understudied and future research would benefit by including paternal behavior and cognitions, and the dyadic processes between mothers and fathers. A second, related, limitation is that this study did not take into account the role of social support from family and friends, as well as from partners. In general, marital satisfaction declines across the transition to parenthood (Belsky, Spanier, & Rovine, 1983), although individual difference exist. Yet couples experiencing larger declines in marital satisfaction after the birth or their first child may be less inclined to have a second child within 2 years of the first. Importantly, social support has been found to be associated with parenting self-efficacy (e.g., Giallo et al., 2013). Future studies should examine the direct and indirect role of various forms of social and partner support in the decision-making process of having a second child. Third, whether mothers change their minds about having a second child has not been taken into account. A total of 53% of the mothers had a second child compared with 65% in the Dutch population (Statistics Netherlands, 2011). This somewhat smaller amount of mothers with two children is consistent with the demographic composition of the sample. According to Statistics Netherlands (2008), mothers between ages 29 and 35 have a second child, on average, 2.8 years after the first. Mothers in the current study had an average maternal age of 30.36 and because the 2-year assessment took place 2.3 years after birth of the first child, mothers who wanted a second child may have had a second child with a longer follow-up period after the first child's birth. Therefore, our findings must be understood within this time frame, and it is quite possible that the undecided mothers may have decided to have a second child at some later point beyond 2.3 years or that mothers who stated they did not want a second child may very well

have changed their minds and decided to have a second child. Fourth, Macklon, Geraedts, and Fauser (2002) claimed that even under optimal circumstances, the chances of a successful pregnancy per menstrual cycle is only 30% to 40% and this declines even further with advancing maternal age. Thus, some of the differences between women who wanted a second child and women who had a second child may be partly due to physical and health factors related to fertility than psychosocial factors examined here. Fifth, the small group of women ($n = 39$) who did not yet know whether they wanted a second child may not have had the statistical power to yield significant results. More participants in this condition would shed more light on possible effects women wanting or having a second child. Future studies may benefit from using nested models as we found associations between first-time motherhood comparing second child statuses (i.e., have, want, undecided, not want a second child) which may not have been detected by other analyses.

A recommendation for practice pertains to our finding that unmet childbirth expectations predicted lower inclination to have a second child. Preventing discrepancies between birth expectations and experiences starts with adequate and realistic information about pregnancy, giving birth, and the feelings new parents may have faced with. Nolan (2009) points to the importance of high-quality (i.e., complex information about the delivery by a trained professional in small groups) antenatal classes for pregnant women. Low-quality antenatal classes may result in false and unrealistic expectations resulting in a higher chance of unmet expectations after birth. Practice would benefit from creating an environment where mothers-to-be can learn from each other in small groups and can ask questions to a health care professional in person (Nolan, 2009), to narrow the gap between birth expectations and experiences.

Conclusion

The results of the current study suggested that, besides mothers' affective state and experiences around the transition to parenthood, higher prenatal parenting self-efficacy played a role, albeit a modest one, for mothers with two children compared with mothers who wanted two children. The results indicated that, besides the predominant role of demographic factors, psychosocial factors differed between mothers with and without a second child. The current study may stimulate researchers from various fields (e.g., demographical, sociological, psychological) to consider first-time motherhood experiences as relevant predictors of subsequent childbearing. In addition, the study demonstrated that more insight in prenatal differences setting women apart in terms of childbearing beyond the first child may be of importance and should be further explored.

Acknowledgments

The authors are grateful to all the mothers for participation in the study and to researchers and research assistants for help with data collection.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by a grant from the foundation Stichting tot Steun Nederland and the Netherlands Organization for Scientific Research (400-09-123).

References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191-215. doi:10.1037//0033-295x.84.2.191

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122-147. doi:10.1037/0003-066X.37.2.122

Belsky, J., Spanier, G. B., & Rovine, M. (1983). Stability and change in marriage across the transition to parenthood. *Journal of Marriage and the Family*, *45*, 567-577. doi:10.2307/351661

Bongaarts, J. (2002). The end of the fertility transition in the developed world. *Population and Development Review*, *28*, 419-443. doi:10.1111/j.1728-4457.2002.00419.x

Bryanton, J., Gagnon, A. J., Hatem, M., & Johnston, C. (2008). Predictors of early parenting self-efficacy: Results of a prospective cohort study. *Nursing Research*, *57*, 252-259. doi:10.1097/01.NNR.0000313490.56788.cd

Coleman, P. K., & Karraker, K. H. (1998). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, *18*, 47-85. doi:10.1006/drev.1997.0448

Field, A. (2009). *Discovering statistics using SPSS*. Thousand Oaks, CA: Sage.

Foster, C. (2000). The limits to low fertility: A biosocial approach. *Population and Development Review*, *26*, 209-234. doi:10.1111/j.1728-4457.2000.00209.x

Gameiro, S., Moura-Ramos, M., & Canavarro, M. C. (2009). Maternal adjustment to the birth of a child: Primiparity versus multiparity. *Journal of Reproductive and Infant Psychology*, *27*, 269-286. doi:10.1080/02646830802350898

Giallo, R., Treyvaud, K., Cooklin, A., & Wade, C. (2013). Mothers' and fathers' involvement in home activities with their children: Psychosocial factors and the role of parental self-efficacy. *Early Child Development and Care*, *183*, 343-359. doi:10.1080/03004430.20 12.711587

Gottvall, K., & Waldenström, U. (2002). Does a traumatic birth experience have an impact on future reproduction? *BJOG: An International Journal of Obstetrics and Gynaecology*, *109*, 254-260. doi:10.1016/s1470-0328(02)01200-4

Haandrikman, K., & Van Wissen, L. J. (2008). Effects of the fertility transition on birth seasonality in the Netherlands. *Journal of Biosocial Science*, *40*, 655-672. doi:10.1017/S0021932008002733

Hank, K. (2007). Parental gender preferences and reproductive behaviour: A review of the recent literature. *Journal of Biosocial Science*, *39*, 759-767.

Hauck, Y., Fenwick, J., Downie, J., & Butt, J. (2007). The influence of childbirth expectations on Western Australian women's perceptions of their birth experience. *Midwifery*, *23*, 235-247. doi:10.1016/j.midw.2006.02.002

Heaman, M., Beaton, J., Gupton, A., & Sloan, J. (1992). A comparison of childbirth expectations in high-risk and low-risk pregnant women. *Clinical Nursing Research*, *1*, 252-265. doi:10.1177/105477389200100305

Hosmer, D. W., & Lemeshow, S. (1989). *Applied logistic regression*. Hoboken, NJ: John Wiley.

Huizink, A. C. (2000). *Prenatal stress and its effect on infant development* (Unpublished doctoral dissertation). University Utrecht, Utrecht, Netherlands.

Huizink, A. C., Mulder, E. J. H., Robles de Medina, P. G., Visser, G. H. A., & Buitelaar, J. K. (2004). Is pregnancy anxiety a distinctive syndrome? *Early Human Development*, *79*, 81-91. doi:10.1016/j.earlhumdev.2004.04.014

Hutteman, R., Bleidorn, W., Penke, L., & Denissen, J. J. (2013). It takes two: A longitudinal dyadic study on predictors of fertility outcomes. *Journal of Personality*, *81*, 487-498.

Jokela, M. (2010). Characteristics of the first child predict the parents' probability of having another child. *Developmental Psychology*, *46*, 915-926. doi:10.1037/a0019658

Jokela, M., Kivimäki, M., Elovainio, M., & Keltikangas-Järvinen, L. (2009). Personality and having children: A two-way relationship. *Journal of Personality and Social Psychology*, *96*, 218-230. doi:10.1037/a0014058

Klint Carlander, A. K., Andolf, E., Edman, G., & Wiklund, I. (2014). Impact of clinical factors and personality on the decision to have a second child: Longitudinal cohort-study of first-time mothers. *Acta Obstetricia et Gynecologica Scandinavica*, *93*, 182-188. doi:10.1111/aogs.12306

Kunseler, F. C., Willemen, A. M., Oosterman, M., & Schuengel, C. (2014). Changes in parenting self-efficacy and mood symptoms in the transition to parenthood: A bidirectional association. *Parenting: Science and Practice*, *14*, 215-234. doi:10.1080/15295192.2014.972758

Leerkes, E. M., & Crockenberg, S. C. (2002). The development of maternal self-efficacy and its impact on maternal behavior. *Infancy*, *3*, 227-247. doi:10.1207/s15327078in0302_7

Little, A. (1988). Missing-data adjustments in large surveys. *Journal of Business & Economic Statistics*, *6*, 287-296.

Macklon, N. S., Geraedts, J. P., & Fauser, B. C. (2002). Conception to ongoing pregnancy: The "black box" of early pregnancy loss. *Human Reproduction Update*, *8*, 333-343. doi:10.1093/humupd/8.4.333

McLanahan, S. (2004). Diverging destinies: How children are faring under the second demographic transition. *Demography*, *41*, 607-627. doi:10.1353/dem.2004.0033

Miller-Heyl, J., MacPhee, D., & Fritz, J. J. (1998). DARE to be you: A family-support, early prevention program. *Journal of Primary Prevention*, *18*, 257-285. doi:10.1023/A:10 24602927381

Nolan, M. L. (2009). Information giving and education in pregnancy: A review of qualitative studies. *Journal of Perinatal Education*, *18*, 21-30. doi:10.1624/105 812409X474681

Oppenheimer, V. K. (1994). Women's rising employment and the future of the family in industrial societies. *Population and Development Review*, *20*, 293-342. doi:10.2307/2137521

Pedersen, F., Bryan, Y., Huffman, L., & Del Carmen, R. (1989, April). *Constructions of self and offspring in the pregnancy and early infancy periods*. Paper presented at meetings of Society for Research in Child Development, Kansas City, MO.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*, 717-731. doi:10.3758/BF03206553

Rothbart, M. K. (1981). Measurement of temperament in infancy. *Child Development*, *52*, 569-578.

Sobotka, T., Skirbekk, V., & Philipov, D. (2011). Economic recession and fertility in the developed world. *Population and Development Review*, *37*, 267-306. doi:10.1111/j.1728-4457.2011.00411.x

Spielberger, C. D. (2010). *State-Trait Anxiety Inventory*. Retrieved from http://onlinelibrary.wiley.com/

Statistics Netherlands. (2008). *Jonge moeders stellen tweede kind langer uit* [Younger mothers postpone second child]. Retrieved from http://www.cbs.nl/NR/rdonlyres/75EDC4C9-8E9B-40EB-99C5-F929661410C1/0/2011k4p27b15art.pdf

Statistics Netherlands. (2011). *Mannen en vrouwen in Nederland* [Men and women in the Netherlands]. Retrieved from http://www.cbs.nl/NR/rdonlyres/9A0E2D35-B9B6-4BB0-B6D5-C9727B3F0181/0/2011k1b15p37art.pdf

Statistics Netherlands. (2012). *Beroepsbevolking* [Labor force]. Retrieved from http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=7182-2ned&D1=2&D2=l&D3=0&D4=0,l&D5=0-2,4,8-10&D6=0&D7=l&HD=50513-1040&HDR=T,G1&STB=G2,G3,G5,G4,G6

Statistics Netherlands. (2013a). *Geboorte* [Birth]. Retrieved from http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=37422ned&D1=7-14,23-34&D2=0,10,20,30,40,50,60,62-63&VW=T

Statistics Netherlands. (2013b). *Gemiddeld inkomen* [Average income]. Retrieved from http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=70843ned&D1=0,2,4-5&D2=13&D3=41-45,48-49&D4=l&HD=150513-1059&HDR=G3,T&STB=G1,G2

Statistics Netherlands. (2014). *Bevolking* [Population]. Retrieved from http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=37325&D1=1-4&D2=l&D3=0&D4=0&D51,3-4&D6=l&HD=150513-1105&HDR=T&STB=G1,G2,G3,G4,G5

Teti, D. M., O'Connell, M. A., & Reiner, C. D. (1996). Parenting sensitivity, parental depression and child health: The mediational role of parental self-efficacy. *Early Development & Parenting*, *5*, 237-250. doi:10.1002/(sici)1099-0917(199612)5:4<237::aid-edp136> 3.3.co;2-x

Thomson, E. (1997). Couple childbearing desires, intentions, and births. *Demography*, *34*, 343-354. doi:10.2307/3038288

Van Bakel, H. J. A., & Riksen-Walraven, J. M. (2002). Parenting and development of one-year-olds: Links with parental, contextual, and child characteristics. *Child Development*, *73*, 256-273. doi:10.1111/1467-8624.00404

Van der Does, A. (2002). *BDI-II-NL Handleiding. De Nederlandse versie van de Beck Depression Inventory–second edition [BDI-II-NL Instructions. The Dutch version of the Beck Depression Inventory-second edition]*. Lisse, Netherlands: Harcourt Test.

Van der Ploeg, H., Defares, P., & Spielberger, C. (1980). *Handleiding bij de Zelf-Beoordelings-vragenlijst. Een Nederlandstalige bewerking van de Spielberger State-Trait Anxiety Inventory [Instructions of the self-assessement-questionnaire. A Dutch version of the State-Trait Anxiety Inventory]*. Lisse, Netherlands: Zwets & Zeitlinger.